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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/018,588	UEDA ET AL.
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17, 19-21, 23, 24, 26 and 27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-17, 19-21, 23, 24, 26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *12/12/2001, 12/21/2005*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4, and 16-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Akiwumi-Assani et al. (US Patent 5,532,744) and Jones (US

Patent 5,724,537).

Regarding claim 1, Akiwumi-Assani et al. disclose a decoding device for

decoding a coded stream (Fig. 1 and Abstract), the device comprising: a plurality of

decoding means for decoding the coded stream (Fig. 1 and Abstract); and decoding

control means for controlling the plurality of decoding means to operate in parallel (Fig.

1; Abstract; column 5, lines 13-15).

However, Akiwumi-Assani et al. do not disclose storage means for storing

values; detecting means for detecting when each stored value in the storage means are

a first value; and selecting means for selecting picture data decoded by the decoding

means for which the corresponding values stored in the storage means are a second

value; wherein the value stored in the storage means corresponding to the decoding

means which decoded the selected picture data are changed to the first value.

Jones discloses storage means for storing values (column 251, lines 13-40);

detecting means for detecting when each stored value in the storage means are a first

value (column 251, lines 13-40; column 249, lines 3-6; column 258, lines 13-22); and

selecting means for selecting picture data decoded by the decoding means for which

the corresponding values stored in the storage means are a second value (column 248,

lines 61-65); wherein the value stored in the storage means corresponding to the

decoding means which decoded the selected picture data are changed to the first value

(column 249, lines 3-6).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the storage means disclosed by Jones into the decoding

device disclosed by Akiwumi-Assani et al. to reuse memory resources. The incorporate

feature would save the hardware cost of the device.

Regarding claim 3, Akiwumi-Assani et al. disclose: first buffer means for buffering

the coded stream (column 5, lines 24-32); reading means for reading out a start code

indicating the start of a predetermined information unit included in the coded stream

from the coded stream (column 5, lines 5-12; lines 20-23) and reading out position

information related to the position where the start coded is held to the first buffer means

(column 5, lines 20-22, 35-38); second buffer means for buffering the start code and the

position information read out by the reading means ("slice parser" in column 5, lines 35-

38; "array in memory" in column 5, lines 22-23); and buffering control means for

controlling the buffering of the coded stream by the first buffer means and the buffering

of the start code and the position information by the second buffer means ("system

controller" in Fig. 1 and column 5, lines 20-23, 30-32).

Regarding claim 4, Akiwumi-Assani et al. anticipate the coded stream to be an

MPEG2 coded stream prescribed by the ISO/IEC 13818-2 and ITU-T

Recommendations H.262 (column 4, lines 16-20).

Regarding claim 16, it is rejected for the same reason as discussed in claim 1

above.

Regarding claim 17, it is rejected for the same reason as discussed in claim 1

above.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Akiwumi-Assani et al. (US Patent 5,532,744), Jones (US Patent 5,724,537),

and Phillips et al. (US Patent 5,510,842).

Regarding claim 19, Akiwumi-Assani et al. disclose a decoding device for

decoding a coded stream (Fig. 1 and Abstract), the device comprising: a plurality of

slice decoders for decoding the coded stream (column 6, lines 46-49); and slice

decoder control means for controlling the plurality of slice decoders to operate in parallel

("system controller" in Fig. 1; Abstract; column 5, lines 13-15).

However, Akiwumi-Assani et al. do not disclose storage means for storing

values; selecting means for selecting predetermined picture data of a plurality of picture

data decoded and outputted by the plurality of slice decoders; motion compensation

means for receiving the picture data selected by the selecting step and performing

motion compensation, if necessary; and detecting means for detecting when each

stored value in a storage means are a first value, selects picture data decoded by the

decoding means for which the corresponding values stored in the storage means are a

second value, and wherein the value stored in the storage means corresponding to the decoding means which decoded the selected picture data are changed to the first value.

Jones discloses storage means for storing values (column 251, lines 13-40); selecting means for selecting predetermined picture data of a plurality of picture data decoded and outputted by decoders (column 248, lines 61-65); detecting means for detecting when each stored value in the storage means are a first value (column 251, lines 13-40; column 249, lines 3-6; column 258, lines 13-22), selects picture data decoded for which the corresponding values stored in the storage means are a second value (column 248, lines 61-65), and wherein the value stored in the storage means corresponding to the decoding means which decoded the selected picture data are changed to the first value (column 249, lines 3-6).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the storage means disclosed by Jones into the decoding device disclosed by Akiwumi-Assani et al. to reuse memory resources. The incorporate feature would save the hardware cost of the device.

However, the proposed combination of Akiwumi-Assani et al. and Jones does not disclose motion compensation means for receiving the picture data selected by the selecting step and performing motion compensation, if necessary.

Phillips et al. discloses motion compensation means for receiving the picture data selected by the selecting means and performing motion compensation, if necessary ("motion compensation processors", in column 8, lines 11-67; column 9, lines 1-15).

One of ordinary skill in the art at the time the invention was made would have
been motivated to incorporate the motion compensation means disclosed by Phillips et
al. into the decoding device disclosed by Akiwumi-Assani et al. to decode video streams
of existing encoding standards such as MPEG, which uses motion compensation in
encoding.

Regarding claim 20, it is rejected for the same reason as discussed in claim 19
above.

Regarding claim 21, it is rejected for the same reason as discussed in claim 19
above.

**Claims 1, 5-7, and 16-17 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Kwon (EP 0720372 A1) and Jones (US Patent 5,724,537).**

Regarding to claim 1, Kwon discloses a decoding device for decoding a coded
stream (column 3, lines 2-5), the device comprising: a plurality of decoding means for
decoding the coded stream (Fig. 4 and column 3, lines 18-21); and decoding control
means for controlling the plurality of decoding means to operate in parallel ("Control 90"
in Fig. 4).

However, Kwon does not disclose storage means for storing values; detecting
means for detecting when each stored value in the storage means are a first value; and
selecting means for selecting picture data decoded by the decoding means for which
the corresponding values stored in the storage means are a second value; wherein the
value stored in the storage means corresponding to the decoding means which
decoded the selected picture data are changed to the first value.

Jones discloses storage means for storing values (column 251, lines 13-40); detecting means for detecting when each stored value in the storage means are a first value (column 251, lines 13-40; column 249, lines 3-6; column 258, lines 13-22); and selecting means for selecting picture data decoded by the decoding means for which the corresponding values stored in the storage means are a second value (column 248, lines 61-65); wherein the value stored in the storage means corresponding to the decoding means which decoded the selected picture data are changed to the first value (column 249, lines 3-6).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the storage means disclosed by Jones into the decoding device disclosed by Kwon to reuse memory resources. The incorporate feature would save the hardware cost of the device.

Regarding to claim 5, Kwon discloses: selecting means for selecting predetermined picture data of a plurality of picture data decoded and outputted by the plurality of decoding means ("motion compensator" in column 7, lines 6-8); and motion compensation means for receiving the picture data selected by the selecting means and performing motion compensation ("motion compensator", "adder" in column 7, lines 6-16).

Regarding claim 6, see the discussion of claim 5 above. Furthermore, Jones also discloses the decoding means outputs an end signal indicating that decoding processing has ended to the selecting means (column 248, lines 61-65; column 249, lines 3-6), and wherein the selecting means has storage means for storing values

corresponding to the respective processing statuses of the plurality of decoding means (column 251, lines 13-40), changes, from a first value to a second value, the values stored in the storage means corresponding to the decoding means outputting the end signal indicating that decoding processing has ended (column 251, lines 13-40; column 248, lines 61-65), when all the values in the storage means are the first value, selects one of the picture data decoded by the decoding means for which the corresponding values stored in the storage means are the second value (column 251, lines 13-40; column 248, lines 61-65), and changes the value stored in the storage means corresponding to the decoding means which decoded the selected picture data, to the first value (column 249, lines 3-6).

Regarding to claim 7, Kwon discloses: a holding means for holding the picture data selected by the selecting means or the picture data on which motion compensation is performed by the motion compensation means ("frame memory 307" in Fig. 5 and in column 7, lines 6-9) ; and holding control means for controlling the holding, by the holding means, of the picture data selected by the selecting means or the picture data on which motion compensation is performed by the motion compensation means ("motion compensator 302" and "adder 306" in Fig. 5, column 7, lines 6-16).

Regarding claim 16, it is rejected for the same reason as discussed in claim 1 above.

Regarding claim 17, it is rejected for the same reason as discussed in claim 1 above.

Claims 1, 3, 5-8, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (US Patent 5,510,842) and Jones (US Patent 5,724,537).

Regarding to claim 1, Phillips et al. disclose a decoding device for decoding a coded stream (column 2, lines 25-28), the device comprising: a plurality of decoding means for decoding the coded stream (column 2, lines 32-38; column 3, lines 36-38); and decoding control means for controlling the plurality of decoding means to operate in parallel ("Deformatter/Router 110" in Fig. 1; column 2, lines 29-32; column 45-52).

However, Phillips et al. do not disclose storage means for storing values; detecting means for detecting when each stored value in the storage means are a first value; and selecting means for selecting picture data decoded by the decoding means for which the corresponding values stored in the storage means are a second value; wherein the value stored in the storage means corresponding to the decoding means which decoded the selected picture data are changed to the first value.

Jones discloses storage means for storing values (column 251, lines 13-40); detecting means for detecting when each stored value in the storage means are a first value (column 251, lines 13-40; column 249, lines 3-6; column 258, lines 13-22); and selecting means for selecting picture data decoded by the decoding means for which the corresponding values stored in the storage means are a second value (column 248, lines 61-65); wherein the value stored in the storage means corresponding to the decoding means which decoded the selected picture data are changed to the first value (column 249, lines 3-6).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the storage means disclosed by Jones into the decoding

device disclosed by Phillips et al. to reuse memory resources. The incorporate feature

would save the hardware cost of the device.

Regarding claim 3, Phillips et al. also disclose: first buffer means for buffering the

coded stream ("32-bit Shift Register" in Fig. 2 of "Deformatter/Router" in column 3, lines

42-48); reading means for reading out a start code indicating the start of a

predetermined information unit included in the coded stream from the coded stream

("start code detector" in Fig. 2; column 5, lines 46-60) and reading out position

information related to the position where the start coded is held to the first buffer means

(column 5, lines 54-65); second buffer means for buffering the start code and the

position information read out by the reading means ("decoders" in column 5, lines 54-

65); and buffering control means for controlling the buffering of the coded stream by the

first buffer means and the buffering of the start code and the position information by the

second buffer means ("8-1 Multiplexer 210" and "Start Code Detector" in Fig. 2; and

"Deformatter/Router 110" of Fig. 1; column 5, lines 54-65).

Regarding to claim 5, Phillips et al. also discloses: selecting means for selecting

predetermined picture data of a plurality of picture data decoded and outputted by the

plurality of decoding means ("motion compensation processors" in column 7, lines 7-

11); and motion compensation means for receiving the picture data selected by the

selecting means and performing motion compensation ("motion compensation

processors", in column 8, lines 11-67; column 9, lines 1-15).

Regarding claim 6, see the discussion of claim 5 above. Furthermore, Jones also

discloses the decoding means outputs an end signal indicating that decoding

processing has ended to the selecting means (column 248, lines 61-65; column 249,

lines 3-6), and wherein the selecting means has storage means for storing values

corresponding to the respective processing statuses of the plurality of decoding means

(column 251, lines 13-40), changes, from a first value to a second value, the values

stored in the storage means corresponding to the decoding means outputting the end

signal indicating that decoding processing has ended (column 251, lines 13-40; column

248, lines 61-65), when all the values in the storage means are the first value, selects

one of the picture data decoded by the decoding means for which the corresponding

values stored in the storage means are the second value (column 251, lines 13-40;

column 248, lines 61-65), and changes the value stored in the storage means

corresponding to the decoding means which decoded the selected picture data, to the

first value (column 249, lines 3-6).

Regarding to claim 7, Phillips et al. also discloses: a holding means for holding

the picture data selected by the selecting means or the picture data on which motion

compensation is performed by the motion compensation means ("MC Memory A", "MC

Memory B", "FIFOs" in Fig. 6; column 8, lines 11-67; column 9, lines 1-15) ; and holding

control means for controlling the holding, by the holding means, of the picture data

selected by the selecting means or the picture data on which motion compensation is

performed by the motion compensation means ("Data-path Controller 626" in Fig. 6;

column 9, lines 7-10).

Regarding to claim 8, Phillips et al. also discloses the holding means separately

holds a luminance component and color-difference components of the picture data (Fig.

5; column 6, lines 56-65; column 8, lines 16-19).

Regarding claim 14, Phillips et al. also discloses the output means for reading

and outputting the picture data held by the holding means ("Interpolation Filter 118 and

raster converter 120" in Fig. 1, column 3, lines 35-41); wherein the decoding means is

capable of decoding the coded stream at a speed of N times the processing speed

necessary for normal reproduction (with N = 1 in column 3, lines 35-41); and the output

means is capable of outputting the picture data of N frames each, of the picture data

held by the holding means (with N = 1 in column 3, lines 38-41).

Regarding claim 15, it is rejected for the same reason as discussed in claims 1,

3, 5, and 7.

Regarding claim 16, it is rejected for the same reason as discussed in claim 1

above.

Regarding claim 17, it is rejected for the same reason as discussed in claim 1

above.

Claims 2, 23-24, and 26-27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Akiwumi-Assani et al. (US Patent 5,532,744) and Jones (US

Patent 5,724,537) as applied to claims 1, 3, 4, and 16-17 above, and further in view

of Allen et al. (US Patent 5,381,145).

Regarding claim 2, see the teachings of Akiwumi-Assani et al. and Jones as

discussed in claim 1 above. However, the proposed combination of Akiwumi-Assani et

al. and Jones does not teach the plurality of decoding means to output a signal indicating the end of decoding processing to the decoding control means, and the decoding control means to control the decoding means which outputted the signal indicating the end of decoding processing, to decode the coded stream.

Allen et al. teach the plurality of decoding means to output a signal indicating the end of decoding processing to the decoding control means ("feedback signal" in column 5, lines 56-63), and the decoding control means to control the decoding means which outputted the signal indicating the end of decoding processing, to decode the coded stream (column 5, lines 64-68; column 6, line 1).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the use of the feedback signal taught by Allen et al. into the decoding device taught by Akiwumi-Assani et al. and Jones to increase the bandwidth by reducing the idle time of individual components.

Regarding claim 23, Akiwumi-Assani et al. also disclose a decoding device for decoding a source coded stream (Fig. 1 and Abstract), the device comprising: a plurality of slice decoders for decoding the source coded stream for each slice constituting a picture of the source coded stream (column 6, lines 46-49); and control means for controlling the plurality of slice decoders ("system controller" in Fig. 1; Abstract; column 5, lines 13-15);

However, the proposed combination of Akiwumi-Assani et al. and Jones does not disclose: the control means for monitoring the statuses of the plurality of the slice decoders; and wherein the control means allocates the slices to the plurality of slice

decoders so as to realize the fastest decoding processing of the picture by the slice decoders irrespective of the order of the slices included in the picture.

Allen et al. disclose a method and apparatus for encoding and decoding data in parallel, in which the control means for monitoring the statuses of the plurality of the slice decoders (by reading the "feedback signals" in column 5, lines 56-63); and wherein the control means allocates the slices to the plurality of slice decoders so as to realize the fastest decoding processing of the picture by the slice decoders irrespective of the order of the slices included in the picture (allocating slices to decoder based upon reading the "feedback signals" only in column 5, lines 56-63).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the use of the feedback signal to monitor the statuses of the decoders taught by Allen et al. into the control means taught by Akiwumi-Assani et al. and Jones to increase the bandwidth by reducing the idle time of individual components.

Claim 24 is rejected for the same reason as discussed in claim 23 above.

Regarding claim 26, see the discussion of claim 2 above. Additionally, Allen et al. also disclose the control means allocating the slice to be decoded to the slice decoder which ended decoding (column 5, lines 56-63).

Claim 27 is rejected for the same reason as discussed in claim 26 above.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (US Patent 5,510,842) and Jones (US Patent 5,724,537) as applied to

claims 1, 3, 5-8, and 14-17 above, and further in view of Iwamura et al. (US Patent (5,715,354).

Regarding claim 9, see the teachings of Phillips et al. and Jones as discussed in claim 1 above. Additionally, Phillips et al. also teach the change means for changing the order of frames of the coded stream supplied to the decoding means ("motion compensation processors 116" in Fig. 1; column 7, lines 52-57). However, the proposed combination of Phillips et al. and Jones does not teach that the holding means can hold at least two more frames than the number of frames obtained by totaling intra-coded frames and forward predictive coded frames within a picture sequence, and the change means can change the order of frames of the coded stream so as to make a predetermined order for reverse reproduction of the coded stream.

Iwamura et al. teach the use of a ring buffer for storing image data in terms of one GOP, the total frames of which would be greater than two plus total number of the intra-coded frame and forward predictive frames (see Fig. 4B) and when reverse reproduction is demanded, can be read in predetermined reverse order (Fig. 5F; column 7, lines 7-12).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the concept of using the ring buffer for data reverse reproduction taught by Iwamura et al. into the decoding device taught by Phillips et al. and Jones to provide a user-friendly device by implementing the reverse playback feature.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (US Patent 5,510,842), Jones (US Patent 5,724,537), and Iwamura et al. (US Patent 5,715,354) as applied to claims 1, 3, 5-9, and 14-17 above, and further in view of Toebes, VIII et al. (US Patent 5,959,690).

Regarding claim 10, see the teachings of Phillips et al., Jones, and Iwamura et al. as discussed in claim 9 above. Phillips et al. also teach the output means for reading and outputting the picture data held by the holding means ("Interpolation Filter 118 and raster converter 120" in Fig. 1, column 3, lines 35-41). However, the proposed combination of Phillips et al., Jones, and Iwamura et al. does not teach the predetermined order being an order of intra-coded frame, forward predictive coded frames, and bidirectional predictive coded frames, the order within which is the reverse of the coding order; and the output means sequentially reads out and outputs the bidirectional predictive coded frames decoded by the decoding means and held by the holding means, and reads out the intra-coded frame or the forward predictive coded frame held by the holding means, at predetermined timing, and inserts and outputs the intra-coded frame or the forward predictive coded frame at a predetermined position between the bidirectional predictive coded frames.

Toebes, VIII et al. teach the predetermined order being an order of intra-coded frame, forward predictive coded frames, and bidirectional predictive coded frames, the order within which is the reverse of the coding order (column 17, lines 39-67; column 18, lines 1-19); and the output means sequentially reads out and outputs the bidirectional predictive coded frames decoded by the decoding means and held by the

holding means, and reads out the intra-coded frame or the forward predictive coded

frame held by the holding means, at predetermined timing, and inserts and outputs the

intra-coded frame or the forward predictive coded frame at a predetermined position

between the bidirectional predictive coded frames (column 17, lines 39-67; column 18,

lines 1-19).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the method of reverse decoding and reproduction taught

by Toebes, VIII et al. into the decoding device taught by Phillips et al., Jones, and

Iwamura et al. to provide the feature of reverse playback without loss of temporal

resolution (column 7, lines 1-4).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Phillips et al. (US Patent 5,510,842), Jones (US Patent 5,724,537), Iwamura et al.

(US Patent 5,715,354), and Toebes, VIII et al. (US Patent 5,959,690) as applied to

claims 1, 3, 5-10, and 14-17 above, and further in view of Comer (US Patent

6,201,927).

Regarding claim 11, see the teachings of Phillips et al., Jones, Iwamura et al.,

and Toebes, VIII et al. as discussed in claim 10 above. However, the proposed

combination of Phillips et al., Jones, Iwamura et al., and Toebes, VIII et al. does not

teach the predetermined order is such an order that an intra-coded frame or a forward

predictive coded frame of the previous picture sequence decoded by the decoding

means is held by the holding means at the timing when the intra-coded frame or the

forward predictive coded frame is outputted by the output means.

Comer teaches the predetermined order is such an order that an intra-coded

frame or a forward predictive coded frame of the previous picture sequence decoded by

the decoding means is held by the holding means at the timing when the intra-coded

frame or the forward predictive coded frame is outputted by the output means (Fig. 2;

column 3, lines 14-46).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the order in which the intra-coded frame is displayed

while the intra-coded frame of previous sequence is kept in memory taught by Comer et

al. into the decoding device taught by Phillips et al., Jones, Iwamura et al. and Toebes,

VIII et al. to implement the reverse display when the sequence of display goes across

the boundary of the picture sequences.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Phillips et al. (US Patent 5,510,842), Jones (US Patent 5,724,537), and

Iwamura et al. (US Patent 5,715,354) as applied to claims 1, 3, 5-9, and 14-17

above, and further in view of Schipper (US Patent 6,341,193).

Regarding claim 12, see the teachings of Phillips et al., Jones, and Iwamura et

al. as discussed in claim 9 above. Phillips et al. additionally teach, as MPEG standard,

necessary information for decoding the coded stream, wherein the coded stream

includes the information (column 3, lines 53-67; column 4); and control means for

controlling the supply of the information to the decoding means ("detector" in column 5,

lines 46-52); and the control means selects the necessary information for decoding

processing by the decoding means and supplies the necessary information to the

decoding means (column 5, lines 46-52).

However, the proposed combination of Phillips et al., Jones, and Iwamura et al.

does not teach the recording means for recording the necessary information and control

means for controlling the recording of the information by the recording means.

Schipper teaches the recording means for recording MPEG stream, which

includes the necessary information for decoding the stream (Fig. 1; column 2, lines 39-

40); and control means for controlling the recording of the information by the recording

means ("signal processing unit" in Fig. 1).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the recording means and control means taught by

Schipper into the decoding device taught by Phillips et al., Jones, and Iwamura et al. to

provide a user-friendly interface to the device by having the feature of recording.

Regarding claim 13, Phillips et al. also teach the information supplied to the

decoding means by the control means is an upper layer coding parameter

corresponding to a frame decoded by the decoding means (column 5, lines 46-53).
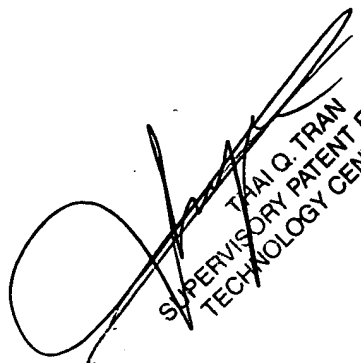
Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hung Q. Dang whose telephone number is 571-270-

1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

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